

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

1-22 (Cancelled)

23. (New) A respirator comprising a hood for enclosing at least the face area of a user, a filter, a fan for generating a flow of air through the filter, a duct for delivering the flow of filtered air to the vicinity of the user's face, a bypass conduit for abstracting a portion of the flow from the duct and subsequently returning the abstracted portion to the remainder of the flow, means for measuring the flow rate of air through bypass conduit and means for controlling the fan in response to the measured rate flow.

24. (New) A respirator according to claim 23, wherein said measurement means comprises a mass air flow sensor.

25. (New) A respirator according to claim 23, wherein the bypass conduit is arranged to return the airflow therethrough to the remainder of the flow in the duct.

26. (New) A respirator according to claim 23, wherein the bypass conduct is arranged to return to the airflow

therethrough to the remainder of the flow in a breathing zone of the respirator.

27. (New) A respirator according to claim 23, wherein said control means is arranged to control power supplied to a motor of the fan depending on the measured flow rate.
28. (New) A respirator according to claim 27, wherein the control means is adapted to control the mark/space ratio of a signal output to the fan motor.
29. (New) A respirator according to claim 23, further comprising display means for providing a visual alert to a user of the respirator in the event of a reduction in the measured flow rate.
30. (New) A respirator according to claim 28, further comprising display means for providing a visual alert to a user of the respirator in the event of a reduction in the measured flow rate and wherein the display means is adapted to generate the visual alert depending on the signal output to the motor.
31. (New) A respirator according to claim 30, wherein the display means comprises a plurality of light emitting

diodes arranged to be illuminated progressively dependant on the mark/space ratio of the signal.


32. (New) A respirator according to claim 23, wherein the filter is removably fitted to inlet structure of a casing of the fan.
33. (New) A respirator according to claim 23, wherein the fan is a tangential fan arranged to receive the filtered air flow from the filter substantially parallel to the axis of rotation of the blades of the fan and to discharge the air flow tangentially to the arc described by the tips of the blades into the duct.
34. (New) A respirator according to claim 23, wherein the fan comprises a casing having two major parts which are held by an anti-vibration mounting.
35. (New) A respirator according to claim 23, further comprising compartments adjacent the ears of a user to accommodate batteries for driving the fan.
36. (New) A screen bar for a respirator helmet or other helmet adapted to carry a protective screen and comprising adjacent each end half of plug and socket joint by which the bar can be mounted on the helmet to dispose the screen

in front of the wearer's face, the bar being pivotable relative to the half-joint so that the screen can be raised while the helmet is being worn and comprising a pivot adjacent each end of the bar, an arm extending from each pivot, each half-joint being attached to a said arm at a point spaced from the pivot so that a free end of the half-joint extends back towards the pivot.

37. (New) A screen bar according to claim 36 being of a curved shape to conform approximately to the shape of the helmet.
38. (New) A screen bar according to claim 36, wherein the half-joints are plugs.
39. (New) A screen bar according to claim 38, wherein each plug comprises a rod having a detent for engaging a corresponding retaining structure in the socket.
40. (New) A respirator or other helmet adapted to carry a protective screen by means of a bar according to claim 36, and comprising the other halves of the plug and socket joints.
41. (New) A helmet as claimed in claim 40 having the other half-joints adjacent the temple regions of the helmet.

42. (New) A helmet as claimed in claim 41, wherein the helmet half-joints are provided on a visor of the helmet.
43. (New) A helmet as claimed in claim 42, wherein the half-joints are disposed on visor pivot covers of the helmet.
44. (New) A helmet as claimed in claim 40, wherein the said helmet halves of the plug and socket joints are sockets.
45. (New) A helmet having a screen bar as claimed in claim 36.
46. (New) A helmet and screen bar combination as claimed in claim 45 each bar pivot being positioned relative to an adjacent pivot of a visor of the helmet so that the helmet visor and the protective screen can be raised together while the helmet is being worn.

Respectfully submitted,

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